future incidents prior to or during the removal and disposal of hazardous substances, the NRC and EPA hotlines will be notified accordingly by the local representatives.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a removal action. Paragraphs (b)(2)(i), (iii), (v), (vi), and (vii) directly apply to the conditions at the Site. Any one of these factors may be sufficient to determine whether a removal action is appropriate.

A. Threats to Public Health or Welfare

1. Exposure to Human Populations, Animals or the Food Chain, NCP Section 300.415(b)(2)(i);

The predominant threat to human populations, animals or the food chain was and is the potential for exposure by direct contact with volatile organic compounds (benzene, hydrogen sulfide, etc.), flammables, corrosives, and unknowns in the containments, tanks, drums, totes, retention pond, bioreactor, and roll-off containers. Containments, ASTs, roll-off containers, and the retention pond have overflowed into the parking lot and into Vince Bayou. The Site is not operated or monitored daily or even weekly by anyone, and containers and containments can fail resulting in spillage into the parking lot and further into Vince Bayou. Spillage can also result in reactions and fire. Routes of exposure exist from direct contact with skin, eyes, and mucous membranes with the leaking material; inhalation of vapors emanating from the containers, containments, and AST's; and ingestion of runoff water and possibly Vince Bayou water. Some specific hazardous substances, detections, health results from exposure, and routes of exposure are listed below (this list is not all inclusive in respect to the hazardous substances, the concentrations, or the health results from exposure):

Acetone: 14 milligrams per Liter (mg/L); uncontrolled releases from the MCC property; skin irritation and damage, smell and respiratory irritation, headaches, unconsciousness, coma; inhalation, ingestion, and skin contact;

Benzene: 3.75 mg/L; seepage from the MCC property chlorine contact tank and the USOR property north tank farm sludge; headaches, unconsciousness, death, effects to the blood and immune system, and is a carcinogen; inhalation, ingestion, and skin contact;

Ethyl benzene: 0.757 mg/L; uncontrolled releases from the MCC property; eye and throat irritation, dizziness, and is a possible carcinogen; inhalation, ingestion, and skin contact;

Toluene: 0.258 mg/L; uncontrolled releases from the MCC property; confusion, memory loss, loss of hearing, loss of appetite, loss of color vision, dizziness, unconsciousness, death, and possible kidney damage; inhalation, ingestion, and skin contact;

Xylene: 4.32 mg/L; uncontrolled releases from the MCC property; headaches, dizziness, confusion, loss of sense of balance, irritation of the skin, eyes, nose, and throat, difficulty breathing, lung problems, delayed reaction time, memory difficulties, possible damage to liver and kidneys, unconsciousness, and death; inhalation, ingestion, and skin contact;

Methyl ethyl ketone (2 Butanone): 0.695 mg/L; the USOR property north tank farm sludge and uncontrolled releases from the MCC property; irritation of the nose, throat, skin, and eyes, birth defects, unconsciousness, and death; inhalation, ingestion, and skin contact; and

Hydrogen sulfide: over 2,000 ppm; the USOR property north tank farm; nasal symptoms, sore throat, cough, impaired lung functions, damage to olfactory epithelium, loss of smell; inhalation.

2. Hazardous Substances or Pollutants or Contaminants in Drums, Barrels, Tanks, or Other Bulk Storage Containers That May Pose a Threat of Release. NCP Section 300.415(b)(2)(iii);

Upon arrival at the Site by EPA during the July 2010 incident response; 797 (55 gallon) drums, 212 (300 to 400 gallon) totes, and 225 (25 cubic yard) roll-off containers were found staged throughout the Site in no particular organization. Containers (drums and totes) inside the warehouse had shown little indication of segregation, spacing, and stability. Upon field hazard characterization spot checking, many of the containers had labeling and markings other than the results of the field screening / hazard characterization analyses. Also, incompatibles (acids and bases) were found adjacent to each other. Corrosives ($10 < pH < 2$) were found in rusted metal drums in poor condition. Flammables were found in drums labeled "Non-Regulated" or "Universal Waste" or with no markings. Bulging drums were found throughout the warehouse. Many of the roll-off containers needed tarps, bows, poles, or repairs to prevent filling up and over flowing given a significant rain event, as what occurred on July 2, 2010.

Additionally, there are approximately 24 AST's (1,000 to 30,000 gallon) located on the north end of the USOR property. They contain various hazardous substances to include benzene (3.75 mg/L), methyl ethyl ketone (0.695 mg/L), corrosives ($10 < pH < 2$), and hydrogen sulfide (over 2,000 ppm). Some of the AST's have seepages, low level valves, and low level access points. It would be very easy for an untrained individual to walk into the USOR north tank farm with no protection, open a valve a few feet off the ground, and become smothered and engulfed in hydrogen sulfide IDLH conditions (NIOSH IDLH is 100 ppm for hydrogen sulfide), liquids, and sludges. During the November 2010 incident response, hydrogen sulfide was measured in the north tank farm liquids shipped for disposal/fuels blending at levels ranging over 2,000 ppm.

3. Weather Conditions That May Cause the Release or Migration of Hazardous Substances, NCP Section 300.415(b)(2)(v);

Pasadena, Texas is subject to several types of extreme weather conditions that could cause the release of hazardous substances, such as flooding, hurricanes, high winds, and significant rain events, such as the one that occurred on July 2, 2010 raising Vince Bayou over its banks and covering North Richey Street with approximately 4 to 4.5 feet of water in a matter of only 3 hours. At the height of this rain event, Vince Bayou was only approximately 25 feet from the facility fence line. Significant rains cause overflow of the facility retention pond, containments, secondary containments, and unloading bays, which all contain hazardous substances (i.e. acetone, benzene, ethyl benzene, methyl ethyl ketone, toluene, xylene) and hazardous flammable and corrosive substances which drain to Vince Bayou approximately 25 to 150 feet away depending on the height of the Vince Bayou water level. The facility is not operated or monitored routinely, and a small release or leak can turn into a significant incident given extreme weather conditions.

4. Threat of Fire or Explosion, NCP Section 300.415 (b)(2)(vi);

Facility tanks, drums, and totes contain flammable liquids, which when not managed appropriately could result in fire and/or explosion. Also with the Site not being operated or monitored routinely and the cold weather months, it's easily conceivable that persons might seek shelter from the cold weather in the facility structures. Untrained persons living amongst the containers and containments can set fires to warm themselves and inadvertently cause an uncontrolled fire. A fire could cause the release of hazardous substances at the Site and put responding fire fighters and neighboring businesses and residents in jeopardy of exposure.

5. Availability of Other Response Mechanisms, NCP Section 300.415(b)(2)(vii)

Upon a release, assistance would not or will not otherwise be provided in a timely basis, because the State of Texas, Harris County, and local governments do not have the resources to deal with a site of this complexity or magnitude. The Site was referred to the EPA by both TCEQ and HCPHES.

C. Threats to the Environment.

Runoff from the site has the potential of contaminating the nearby Vince Bayou. A release of hazardous substances from this site would, therefore, impact the ecosystem of the drainage pathway offsite.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to the public health, welfare, or the environment.

V. ACTIONS TAKEN / PROPOSED AND ESTIMATED COSTS

A. Actions Taken / Proposed

1. Action Description

a. Actions Taken.

Access was requested initially and granted on July 2, 2010 and confirmed again on November 8, 2010 to initiate an EPA emergency assessment and response. This site has had two EPA emergency response actions initiated in July and November of 2010. Both response efforts included containment of hazardous substances, pollutants, or contaminants; mitigation of the threat of release; preliminary assessment of Site conditions, and stabilization of the Site to protect human health and the environment.

Containment efforts included the use of booms and absorbent pads, use of pumps and vacuum trucks, and shipment of liquids for disposal/fuels blending. Mitigation actions included dropping containment content levels to below overflow threat levels or emptying, drum and tote management and staging, and containment spray washing where needed and practical. Stabilization actions include assessing site conditions, securing the Site and containers, and mitigating any potential threats.

Due to the large volume of some contained contaminated materials or the continued contact with storm water, some liquids and sludges were removed from the Site. Contaminated site liquids that accumulated from overflowing containments, secondary containments, unloading bays, leaking drums and totes, and the parking lot were shipped offsite and disposed of at the Inter Gulf Corporation property in Pasadena, Texas. Some of the liquids were neutralized to bring the pH above pH 2.0 for disposal property acceptance. Some liquids required treatment to address significant hydrogen sulfide levels prior to disposal property acceptance. Drums and totes inside the warehouse were managed to continue appropriate segregation and containment. Containments and secondary containments that are open to the elements were emptied of liquids and sludges to minimize future storm water contact, overflow, and offsite migration. Sludges

were sampled, transported, and disposed of accordingly at the Waste Management facility in Conroe, Texas and the US Ecology facility in Robstown, Texas, respectively.

All disposal was and will be in accordance with EPA's Offsite Rule, 40 CFR § 300.440. and CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and all transportation was in accordance with Department of Transportation (DOT) rules and regulations.

Waste Stream	Disposal Facility	Incident Occurrence	Volume/Weight
Hazardous Sludge (Benzene)	US Ecology	Incident 2	11,751 gallons
Hazardous Sludge Washout (Benzene)	US Ecology	Incident 2	5 drums
Nonhazardous Sludge	Waste Management	Incident 2	89.36 tons
PPE/Solids/IDW	Waste Management	Incident 2	10 cubic yards
Nonhazardous liquids	Intergulf	Incident 1	393,500 gallons
Nonhazardous liquids	Intergulf	Incident 2	410,000 gallons
Nonhazardous liquids	Intergulf	Incident 3	30,000 gallons
Nonhazardous liquids	Intergulf	Total	833,500 gallons

Other requirements under the Occupational Safety and Health Act (OSHA) of 1970, 29 U.S.C. § 651 et seq., and under the laws of a State with an approved equivalent worker safety program, as well as other applicable safety and health requirements, were followed. Federal OSHA requirements include, among other things, Hazardous Materials Operation, 20 CFR Part 1910, as amended by 54 Fed. Reg. 9317 (March 1989), all OSHA General Industry (29 CFR Part 1910) and Construction (29 CFR Part 1926) standards wherever they are relevant, as well as OSHA record-keeping and reporting regulations, and the EPA regulations set forth in 40 CFR Part 300 relating to the conduct of work at Superfund sites.

b. Actions Proposed.

The Scope of Work (*See* Attachment 8), of this action includes three phases of action to remove the hazardous substances, pollutants, or contaminants to protect public health and the environment:

i. Site monitoring, maintenance, and containment of hazardous substances, pollutants, and contaminants from migrating off the property and exposing public health and the environment. This includes disposal if needed.

ii. Assessment of all hazardous substances, pollutants, and

contaminants from the Site (not to include subsurface assessment).

iii. Removal and disposal of all hazardous substances, pollutants, and contaminants at the Site.

2. Contribution to Remedial Performance

The emergency response actions and this time-critical action are consistent with any conceivable remedial responses at this Site.

3. Description of Alternative Technologies

The proposed action includes removal and disposal of the chemical wastes that pose the highest risk to public health. No alternative technologies can be applied to these portions of the action.

4. Applicable or Relevant and Appropriate Requirements (ARAR)

This removal action is and was conducted to eliminate the actual or potential exposure to hazardous substances, pollutants or contaminants to the environment, pursuant to CERCLA, 42 U.S.C. § 9601 et seq., and in a manner consistent with the National Contingency Plan (NCP), 40 CFR Part 300, as required at 33 U.S.C. § 1321(c)(2) and 42 U.S.C. § 9605. Pursuant to 40 CFR Part 300.415(j), fund-financed removal actions under CERCLA § 104 and removal actions pursuant to CERCLA § 106 shall, to the extent practicable considering the exigencies of the situation, attain the applicable or relevant and appropriate requirements under Federal environmental law including but not limited to, Toxic Substances Control Act (TCSA), 15 U.S.C. Section 2601 et seq., Clean Air Act (CAA), 42 U.S.C. Section 7401 et seq., Solid Waste Disposal Act (SWDA), 40 U.S.C. Section 6901 et seq., the Resource Conservation and Recovery Act RCRA, 42 U.S.C. Section 6901 et seq., Fish and Wildlife Coordination Act (FWCA) 16 U.S.C. Section 661 et seq., Hazardous Materials Transportation Act (HMTA) 49 U.S.C. Section 1801 et seq., or any promulgated standard, applicable or relevant and appropriate requirements, criteria or limitations under a State environmental or facility citing law that is more stringent than any Federal standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator and identified to the President by the State.

The DOT regulations contain requirements for transportation of hazardous materials, including hazardous wastes, to locations offsite. All hazardous substances, pollutants, or contaminants removed offsite for treatment, storage, or disposal are, were and will be treated, stored, or disposed of at a facility in compliance, as determined by EPA, pursuant to CERCLA

Section 121(d)(3), 42 U.S.C. Section 121(d)(3), and the following rule: "Amendment to the National Oil and Hazardous Substances Pollution Contingency Plan; Procedures for Planning and Implementing Offsite Response Action: Final Rule," 58 FR 49200 (September 22, 1993), and codified at 40 CFR § 300.440."

The Resource Conservation and Recovery Act (RCRA) waste analysis requirements found at 40 CFR § 261.20 and 261.30, RCRA's manifesting requirements found at 40 CFR § 262.20, and RCRA packaging and labeling requirements found at 40 CFR § 262.30 are ARARs for this removal action. Because onsite storage of hazardous wastes exceeded ninety days once the Site was transferred to the Receivership on August 2, 2010, RCRA storage requirements found at 40 CFR § 265 were, are and will be adhered to regarding drum and tote staging, segregation, containment, and signage.

5. Schedule

There have been three incidents at the Site. The initial incident occurred in July of 2010, the second in November of 2010, and the third in January of 2011.

During the first incident response, the EPA obtained access through written and verbal means from the PRP and PRP's counsel and initiated an emergency assessment and classic emergency removal action at the Site on July 2, 2010. The final shipment of waste was conducted on July 30. Demobilization of onsite equipment and frac tanks was conducted on August 2, 2010.

The second incident response activation took place on November 8, 2010. Access was confirmed from the Receivership prior to arrival at the Site. Final shipment of waste was conducted on January 6, 2011, and the Site was secured and stabilized for demobilization on January 7, 2011.

The third incident response activation took place on January 25, 2011. Access was confirmed from the Receivership prior to arrival at the Site. Final shipment of waste was conducted on February 5, 2011.

In the event a new incident occurs at the Site prior to commencement of PRP removal actions; the PRP(s)/Receivership, HCPHES, or TCEQ will contact the NRC and EPA hotlines and OSC appropriately.

B. Estimated Costs

This time-critical action is expected to be performed by the PRP(s) at an estimated cost of less than $6,000,000. Current extramural costs relative to emergency response actions follow:

Extramural Costs:	Initial Ceiling:	11/08/10 Increase:	Current Increase:	Current Ceiling:
Regional Allowance Costs:				
ERRS	$1,100,000	$500,000	$0	$1,600,000
Other Extramural Costs Not Funded From the Regional Allowance:				
START	$200,000	$50,000	$425,000	$675,000
Subtotal, Extramural Costs:	$1,300,000	$550,000	$425,000	$2,275,000
Extramural Costs Contingency:	$0	$139,000	$36,000	$175,000
TOTAL EXTRAMURAL COSTS:	**$1,300,000**	**$689,000**	**$461,000**	**$2,450,000**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If these response actions are not taken at the Site, adjacent residents and workers will continue to be in danger of being exposed to hazardous substances that have and continue to be released at the unmaintained, unmonitored, and abandoned Site. As cited above, such exposure could possibly lead to adverse health effects including coma and death.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this Site.

VIII. ENFORCEMENT

Based on full-cost accounting practices, the total costs incurred for this removal act that will be eligible for cost recovery are estimated to be $ 3,815,353.

(Direct Cost) + (Other Direct) + (42.63% of Total Direct [Indirect Cost) = Estimated EPA Cost for a Removal Action

$ 2,450,000 + $225,000 + (42.63% x ($2,450,000 + S 225,000)) = $3,815,353

Direct costs include direct extramural costs and direct intramural costs. Indirect co calculated based on an estimated indirect cost rate expressed as a percentage of site-specifi direct costs, consistent with the full cost accounting methodology effective October 2, 200 These estimates do not include pre-judgment interest, do not take into account other enforc costs, including Department of Justice costs, and may be adjusted during the course of a re action. The estimates are for illustrative purposes only, and their use is not intended to cre any rights for responsible parties. Neither the lack of a total cost estimate nor the deviatior actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the U.S. Oil Rec (USOR) and MCC properties (collectively, the Site), both located in Pasadena, Texas, dev in accordance with CERCLA, 42 U.S.C. § 9601 et seq., and not inconsistent with the NCP C.F.R. Part 300. This decision is based on the administrative record for the Site.

Conditions at the Site meet the criteria as defined by Section 300.415(b) (2) of the I 40 C.F.R. § 300.415(b) (2), for a removal, and I recommend your formal approval of the documented removal action. The total project ceiling is $ 2,450,000.00. Of this, an estima $1,600,000 (without contingency) is from the Regional Removal Allowance.

Approved: _____ Date: 3/17/11
Samuel Coleman, P.E., Director
Superfund Division

U.S. OIL RECOVERY AND MCC SUPERFUND SITE

ADMINISTRATIVE ORDER ON CONSENT

TIME CRITICAL REMOVAL ACTION

ATTACHMENT C

MAP OF SITE AREA

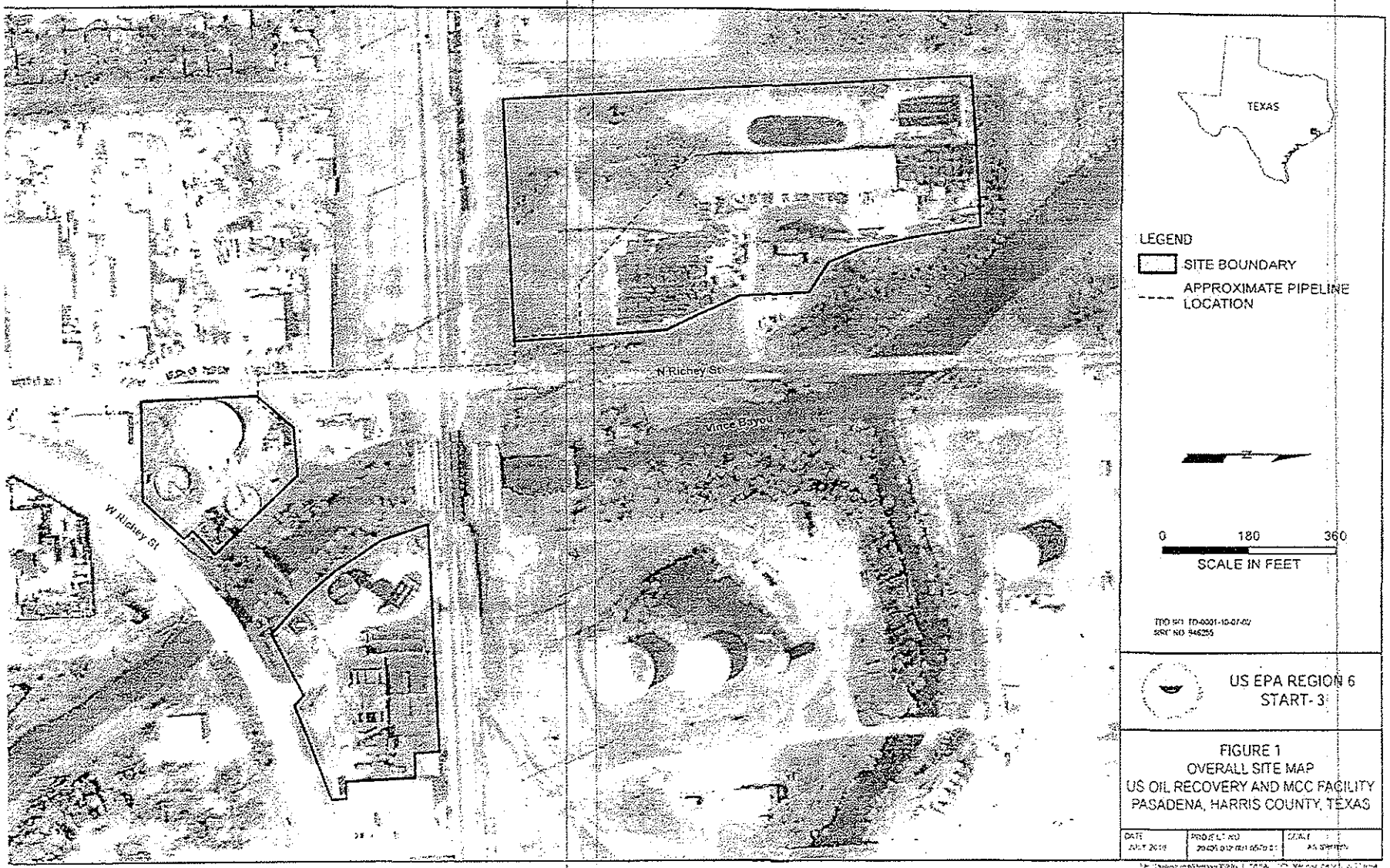

FIGURE 1
OVERALL SITE MAP
US OIL RECOVERY AND MCC FACILITY
PASADENA, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JULY 2019		AS SHOWN

ATTACHMENT C

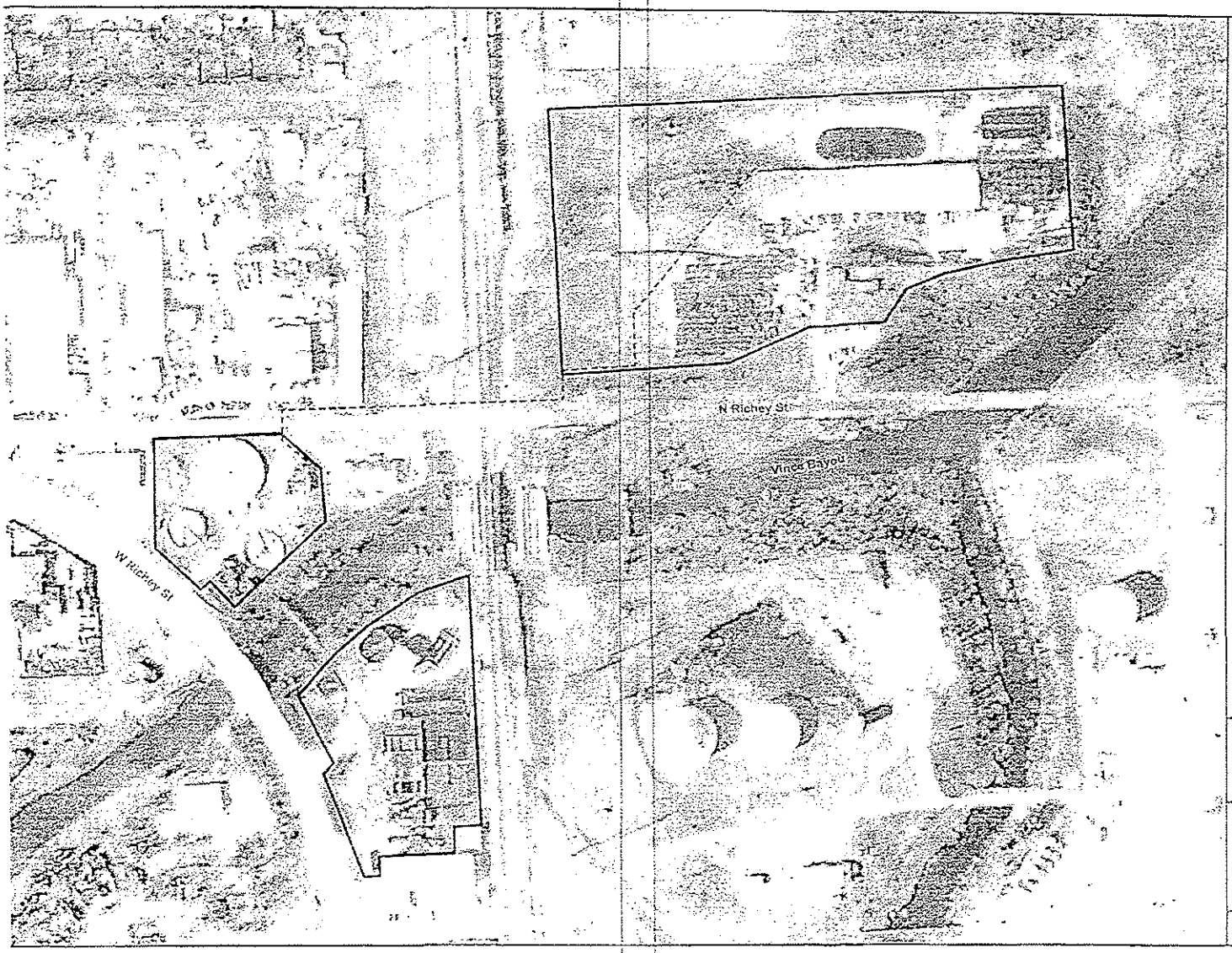

FIGURE 1
OVERALL SITE MAP
US OIL RECOVERY AND MCC FACILITY
PASADENA, HARRIS COUNTY, TEXAS

ATTACHMENT D

ADMINISTRATIVE ORDER ON CONSENT TIME CRITICAL REMOVAL ACTION

ATTACHMENT D

USOR/MCC SITE STABILIZATION/REMOVAL

STATEMENT OF WORK

SITE MONITORING/STABILIZATION

US Oil Recovery and MCC Recycling are both located within Pasadena, Harris County, Texas. On average Pasadena receives approximately 54-inches of rain per year. On average May is the driest month of the year with approximately 1.4-inches of rain, and on average September is the wettest month of the year with approximately 10-inches of rain. Due to the high annual average rainfall and immediate proximity to navigable waterways, Settling Respondents shall perform and commence the work outlined in this Statement of Work within 24 hours after approval of the Work Plan, the Quality Assurance Sampling Plan, and the Health and Safety Plan. The work shall include, at a minimum, the following activities until the aboveground threat is remediated or removed from the site:

1. Conduct site visits twice per week (at least 2 days apart, with one of the days being a Thursday) to document site conditions to include but not be limited to:
    a. Perimeter security.
    b. Structural integrity of the buildings (not to include the office) and secondary containments (i.e. no cracks and/or no visible leaks or seeps)
    c. Available free-board within the containments and secondary containments.
    d. Integrity of the drums/totes/containers on-site.
    e. Photo-document site conditions including but not limited to any changes.
    f. Each site visit report also needs to include a 7-day weather forecast.
    g. Document findings and photo-documentation in an email with the appropriate attachments to a designated EPA point of contact(s).

In the event that less than 4-inches of free-board is available or a significant weather event is forecasted and will threaten the overflow from the containment regardless of the amount of free-board, Settling Respondents shall perform and complete a pump down of the liquids/material contained within the secondary containment. Settling Respondents shall initiate response actions within 24-hours of

documenting site conditions of less than 4-inches of freeboard or threatened overflow due to forecast of significant weather event.

Settling Respondents shall secure and stabilize and/or remove any hazardous substances, pollutants, or contaminants which migrate off-site. If health and safety monitoring of the Settling Respondents' contractor(s) pursuant to the Health and Safety Plan detects hazardous substances, pollutants or contaminants above federal and state NIOSH , OSHA and ACGIH health regulations, Settling Respondents shall 1) evaluate and assess the source of the elevated levels, and; 2) secure and stabilize and/or remove the source to reduce air emission levels to acceptable federal and state health standards. If removal of source material is the determined method of mitigation, Respondents shall conduct waste profiling. (Examples - 1. If air samples are collected from an adjacent property and hydrogen sulfide is detected at hazardous levels, the Settling Respondents shall remove the source material at the US Oil Recovery (USOR/MCC) Site which generated the hydrogen sulfide. 2. If a roll-off container leaks benzene contamination, which blows or drains off-site, the contents in the roll-off container will be removed by the Settling Respondents. 3. If a drum of corrosive substance leaks, the Settling Respondents will overpack, bulk, consolidate, dispose of, or remove by appropriate method, the leaking corrosive drum.)

If Settling Respondents elect to transport liquids/material off-site for disposal, the following items must be presented to EPA for review at least 3 calendar days prior to off-site disposal :

- Documentation of material being disposed including but not limited to sample data, waste volumes, manifests, and approved waste profile.
- Name and address of transportation company along with documentation of appropriate permits and licenses.
- CERCLA Approved and/or RCRA Permitted Disposal facility – name, address, and a point-of-contact
- Proposed disposal option (i.e. recycling, deep well injection, solidification, etc.).

The only exception to this notification deadline is the management of storm water or contamination-contacted storm water after the disposition of such has been initially established and reported to the EPA Point of Contact. Upon establishment of the disposition of the storm water and contamination-contacted storm water, containment content levels are within threat of overflow, and efforts will be

taken within the 24 hour deadline, the EPA Point of Contact will be notified within 4 hours of the decision to remove storm water or contamination-contacted storm water from the Site.

Deadlines and Technical Deliverables:

-Submit Work Plan, HASP, QASP to EPA for approval within 15 days following EPA's approval of Respondent's contractor and Project Coordinator pursuant to Paragraphs 11 and 12 of the Settlement Agreement.

-Be prepared to commence work within 24 hours following Work Plan, HASP and QASP approval.

-3 days – Notification to EPA prior to removing any waste from the Site (specifics are noted above).

-4 hours – Notification to EPA of the actions to remove Storm water or contamination-contacted storm water.

-Monthly Progress Reports shall be provided to EPA on a monthly basis rather than a 30 day basis.

-The work shall continue throughout the duration of any subsequent removal assessment and surface removal work , as needed.